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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,539

01/16/2004

Gyung-su Byon

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01/18/2006

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EXAMINER

LE, THONG QUOC

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Am

Office Action Summary	Application No.	Applicant(s)	
	10/758,539	BYON, GYUNG-SU	
	Examiner	Art Unit	
	Thong Q. Le	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5 and 9-13 is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Amendment filed on 10/27/2005 has been entered.
2. Claims 1-13 are presented for examination.

Response to Arguments

3. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Donnelly et al. (U.S. Patent No. 5,945,862).

Regarding claim 1, Donnelly et al. disclose a semiconductor device (Figure 13) , comprising:

a duty cycle correction (DCC) circuit (Figure 17) that receives first and second clock signals (Figure 17, 2305, 2310) and outputs a duty cycle adjusted clock signal (Figure 17, DCC) ; and

a control circuit (Figure 13, 1615) that detects a process variation and controls respective slew rates of the first and second clock signals based on the detected process variation (Column 6, lines 55-61);

wherein the control circuit controls the respective slew rates of the first and second clock signals (Column 8, lines 44-62) by adjusting capacitance values (Figure 17, 2370, 2375) of first and second input terminals receiving the first and second clock signals respectively (Figure 17).

Regarding claims 6, Donnelly et al. disclose wherein a phase of first clock signal is opposite to a phase of the second clock signal (Figure 11, C, T, Column 4, lines 45-67, Column 5, lines 1-23).

Regarding claim 7, Donnelly et al. disclose an amplifying circuit that receives an external clock sing and outputs the first and second clock signals corresponding to the external clock (Column 7, lines 9-12).

Allowable Subject Matter

6. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8 includes allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Donnelly et al. Chung (U.S. Patent No. 5,945,862), and others, does not teach the claimed invention having a duty cycle adjusted clock signal is used as an internal clock of a synchronous semiconductor memory device as claim 8 discloses.

7. Claims 2-5, 9-13 are allowed.

Claims 2-5, 9-13 includes allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest

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the claimed limitations. Donnelly et al. Chung (U.S. Patent No. 5,945,862), and others, does not teach the claimed invention having a DCC circuit includes a first and a second inverters to receive a first and second clock signals as claims 2-5 and 10-13 disclosed, and a duty cycle adjusted clock signal is used as an internal clock of a synchronous semiconductor memory device as claim 9 disclosed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarabian Amir can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le
Primary Examiner
Art Unit 2827

January 10, 2005